

Appl. No. 09/753,666
Amendment dated June 30, 2004
Reply to Office Action dated April 8, 2004

Attorney Docket: 0994-0206P
Art Unit: 1722
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REMARKS

Applicants thank the Examiner for the thorough consideration given the present application. Claims 1-7 and 9-15 are pending in this application. Claims 1, 9, and 13 are amended. Claims 1, 9, and 13 are independent. Reconsideration of this application, as amended, is respectfully requested.

Reasons for Entry of Amendments

At the outset, it is respectfully requested that this Amendment be entered into the Official File in view of the fact that the amendments to the claims automatically place the application in condition for allowance.

In the alternative, if the Examiner does not agree that this application is in condition for allowance, it is respectfully requested that this Amendment be entered for the purpose of appeal. This Amendment was not presented at an earlier date in view of the fact that Applicants did not fully appreciate the Examiner's position until the Final Office Action was reviewed.

Rejections Under 35 U.S.C. §103(a)

Claims 1-3, 5, 14 and 15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Matsui (U.S. 6,471,504) in view of Bacchi et al. (U.S. 6,105,454).

Claim 4 stands rejected as being unpatentable Matsui in view of Bacchi et al. as applied to claims 1-3, 5, 14 and 15 in further view of Hashimoto et al. (U.S. 5,860,331).

Claims 6 and 7 stand rejected as being unpatentable Matsui in view of Bacchi et al. as

applied to claims 1-3, 5, 14 and 15 in further view of Brenholdt et al. (U.S. 4,693,663).

Claims 9-11 stand rejected as being unpatentable over Matsui in view of Bacchi et al. and Hashimoto et al.

Claim 12 stands rejected as being unpatentable over Matsui in view of Bacchi et al. and Hashimoto et al. as applied to claims 9-11 above, and further in view of Brenholdt et al.

Claim 13 stands rejected as being unpatentable over Matsui in view of Bacchi et al. and Brenholdt et al.

These rejections are respectfully traversed.

Amendments to Independent Claims 1, 9, and 13

While not conceding the appropriateness of the rejections, but merely to advance prosecution, independent claims 1, 9, 13 are amended to recite a combination of elements directed to a robot for a production machine, including

a distal-side shaft rotatably supported on a distal end portion of the second arm;

a second distal-side pulley provided integrally with the distal-side shaft;

a chuck fixed to the distal-side shaft, and

when the first arm and the second arm are extended to position the chuck at a center of the production machine, an end of the first arm connected to the second arm via the intermediate shaft and substantially an entire length of the second arm extend between tie bars of the production machine, so that the end portion of the first arm and substantially the entire length of

the second arm are overlapped between a movable mold and a stationary mold of the production machine.

In addition, independent claim 13 is amended to include

a horizontal arm, the proximal end of which is connected to the rotation mechanism so as to be rotatable about a vertical axis of the rotation mechanism;

a first arm and a second arm, a proximal end of the first arm rotatably connected to a distal end of the horizontal arm, and a proximal end of the second arm being rotatably connected to a distal end of the first arm.

Full support for a second distal-side pulley 12 provided integrally with the distal-side shaft 13; a chuck 15 fixed to the distal-side shaft 13; and extending the first arm 5 and the second arm 11 so as to position the chuck 15 at a center of the production machine 1, thus causing an end of the first arm 5 connected to the second arm 11 via the intermediate shaft and substantially an entire length of the second arm 11 extend between tie bars 21 of the production machine, so that the end portion of the first arm 5 and substantially the entire length of the second arm 11 are overlapped between a movable mold Cm and a stationary mold Cc of the production machine 1 (as set forth in claims 1, 9, and 13), can be seen in FIGS. 1 and 2.

Full support a horizontal arm 23, the proximal end 23r of which is connected to the rotation mechanism 24 so as to be rotatable about a vertical axis of the rotation mechanism 24;

a first arm 5 and a second arm 11, a proximal end of the first arm 5 rotatably connected to a distal end 23f of the horizontal arm 23, and a proximal end of the second arm 11 being rotatably connected to a distal end of the first arm 5 (as set forth in claim 13), can be found in FIG 4 and 5.

It is respectfully submitted that presently amended claims 1, 9, and 13 patentably distinguish over the art cited by the Examiner, including Matsui, Bacchi et al., Hashimoto et al., and Brenholdt et al.

The Examiner is directed to FIG. 4 of the Matsui document, which fails to show that which is claimed in the present invention. For example, the deficiencies of Matsui include:

- Chuck 7 of Matsui is not mounted on a distal shaft rotated by a pulley. As best understood by the Applicants, chuck 7 merely dangles from second arm 5, and maintains its orientation with respect to the machine by gravity.
- As explained by the Examiner (pages 3, 8, and 13 of the Office Action) Matsui merely discloses the chuck 7 moving between the guide bars. As can be seen in Matsui FIG 4, no portion whatsoever of either the first arm 3 or the second arm 5 of Matsui extends between tie bars 72. The assertion by the Examiner beginning on the last line of page 15 to line 2 of page 16 of the Office Action, stating that

“an arm entering between the tie-bars of the molding machine and a large part of the arm is overlapped between the molds” is not correct.

- Matsui fails to teach or suggest a horizontal arm. The Examiner points out first arm 3 and second arm 5, but Matsui has no horizontal arm.

In addition, each of the Bacchi et al., Hashimoto et al., and Brenholdt et al. documents is silent about the combination of elements set forth in each of claims 1, 9, and 13, and thus no combination of the cited references can suggest the presently claimed invention.

Accordingly independent claims 1, 9, and 13 are in condition for allowance.

The dependent claims are also in condition for allowance due to their dependence on allowable independent claims, or due to the additional features set forth therein.

Therefore, reconsideration and withdrawal of the rejections under 35 U.S.C. §103(a) and allowance of all claims are respectfully requested.

CONCLUSION

All the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. It is believed that a full and complete response has been made to the outstanding Office Action, and that the present application is in condition for allowance.

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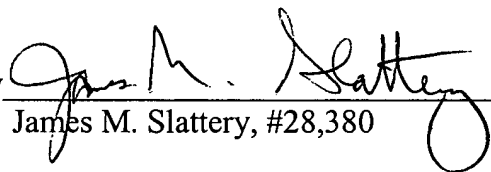
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Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Carl Thomsen (Reg. No. 50,786) at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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